

CLAIMS

1. A honeycomb structural body comprising a plurality of cells formed by providing partition walls composed mainly of cordierite, which has the chemical composition  $\text{SiO}_2$ : 45-55 wt%,  $\text{Al}_2\text{O}_3$ : 33-42 wt%,  $\text{MgO}$ : 12-18 wt%, in a honeycomb fashion,

the honeycomb structural body being characterized in that said cell density is at least 600 cells/in<sup>2</sup> and the pore volume of said partition walls is at least 30%.

2. A honeycomb structural body according to claim 1, characterized in that the pore volume of said partition walls is 35-80%.

3. A honeycomb structural body according to claim 1, characterized in that the thickness of said partition walls is no greater than 80  $\mu\text{m}$ .

4. A honeycomb structural body according to claim 1, characterized in that the average roughness  $R_z$  of the surface of said partition walls is 1-5  $\mu\text{m}$ .

5. A honeycomb structural body according to claim 1, characterized in that the mean size of the fine pores formed inside said partition walls is 1-10  $\mu\text{m}$ .

6. A honeycomb structural body according to claim 1, characterized in that said honeycomb structural body is a catalyst carrier having a catalyst loaded on the surface of said partition walls.